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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,613	09/27/2001	Johannes Ganzert	4100-0133P	9365

2292 7590 09/26/2005

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EXAMINER	
FERRIS III, FRED O	

ART UNIT	PAPER NUMBER
2128	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/963,613	GANZERT, JOHANNES	
	Examiner	Art Unit	
	Fred Ferris	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-25 have been presented for examination based on applicant's amendment filed on 24 June 2005. Claims 1-25 remain rejected by the examiner.

Response to Arguments

2. Applicant's arguments filed 24 June 2005 have been fully considered but are now moot based on new grounds for rejection.

Regarding applicant's response to 102(b) and 103(a) rejections: The examiner now withdraws the previous 102(b) and 103(a) rejection of claims 1-9 in view of applicant's amendment to the claims. However, new 103(a) rejections have now been applied to claims 1-25. (see below)

Preamble of the Claims

3. The preamble of independent claim 1 as presented for examination, has not been given patentable weight. Appropriate weight is given to limitations recited in the body of the claim that are needed for purpose of antecedence. "A mere statement of purpose or intended use in the preamble of a claim need not be considered in finding anticipation; however, it must be considered if the language of a preamble is necessary to give meaning to the claim" Diversitech Corp. v. Century Steps, Inc., 7 USPQ2d 1315 (Fed. Cir. 1988); In re Stencel, 4 USPQ2d 1071 (Fed. Cir. 1987)

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Specifically, claim 8 recites the "mapping of coupling information" relating to the measurement instruments. The examiner has reviewed the specification and found no teaching a specific technique for mapping the coupling information of the measurement instruments such that a skilled artisan could make and or use the claimed invention. Further, the term specific term "mapping" does not appear to be present in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-4, and 7-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,397,021 issued to Lloyd et al in view of U.S. Patent 4,736,374 issued to Kump et al.

Regarding independent claims 1, 10, and 17: Lloyd teaches a method and system for multiple test (measurement) instruments inclusive of a central control processor that is coupled via a second bus with multiple control computers each coupled only to the measuring (test) instrument via a first bus. (Fig. 2, CL2-L37-64, especially line 61) Lloyd further teaches the central computer being coupled to a storage medium. (Fig. 2) Specifically, Lloyd discloses a test (measurement) instrument architecture where "each measuring instrument is respectively coupled to only one of at least one control computer" (Fig. 2, CL2-L37-64, especially line 61).

Lloyd does not explicitly disclose distributing program code among multiple measuring instruments.

Kump teaches a method and system capable of distributing program code (software/firmware) among multiple measuring instruments (test instruments, CL2, 5-21, CL3-L61) inclusive of a central computer (main processor, CL2-L41, Fig. 1) with storage

memory (medium) coupled to multiple control computers (microprocessors, CL2-L45-47, Fig. 1), and where the instruments are coupled to control computers (microprocessors) (CL2-L47, CL4-L58, Fig. 1.) and also coupled via an Ethernet (i.e. inter-regional) network (CL2-L45). (Note: the examiner has equated the test instruments of Kump with the measuring instruments of the present invention) Kump further teaches that the program code is transmitted (downloaded, CL3-L46) to the main (central) computer from the storage medium (mass memory) via the Ethernet (inter-regional) network (CL2-L45). Supplying the program code to the central computer by placing the storage medium in a reading device would obviously be necessary in order to initially "load" the program code for transmission to the central computer. Kump also discloses transmitting (downloading) program code (software, CL3-L46) via the second bus (CL5-L1-14) and transmitting (downloading) program code (CL6-L41-44) from the microprocessors (control computer) via the first bus (CL4-L60-65) to the measuring instruments (CL3-L34-45). (Also see: Abstract, Fig. 2, CL6-L9-17)

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings of Lloyd relating to a central control processor that is coupled via a second bus with multiple control computers each coupled only to the measuring (test) instrument via a first bus, with the teachings of Kump relating to distributing program code (software/firmware) among multiple measuring instruments, to realize the elements of the claimed invention. An obvious motivation exists since, in this case, the Lloyd reference teaches to the Kump reference, and the Kump reference teaches to the Lloyd reference. Specifically, both Lloyd and

Kump teach defining multiple processor measurement instrument architectures and both are used in the same technological arena as noted above. Lloyd teaches to Kump because Lloyd teaches measurement instruments coupled via first and second busses. Kump teaches to Lloyd because Kump specifically teaches updating program code to multiple measuring instruments. (See: Kump: Abstract) Further, the level of skill required by an artisan to realize the claimed limitations of the present invention is clearly established by both references. (See: Lloyd/Kump, Abstract) Accordingly, a skilled artisan tasked with realizing a system and method for distributing program code to a plurality of measuring instruments, and having access to the teachings of Lloyd and Kump, would have knowingly modified the teachings of Lloyd with the teachings of Kump (or visa versa) to realize the claimed elements of the present invention while reducing the cost and development time.

Per claim 2: This claim is rendered obvious by the combination of Lloyd and Kump since Lloyd teaches measuring instruments coupled to only one computer while Kump teaches updating measuring instrument program code as previously cited above.

Per claims 3 and 4: Kump discloses an inter-processor bus capable of passing test (measurement) data that is implemented using Ethernet (CL2-L46, i.e. a serial bus) as noted above and therefore would have knowingly been incorporated by a skilled artisan using the reasoning cited above. The Ethernet configuration coupling processors hence forms an Intranet between the microprocessors. (See: Fig. 1, CL2-L46-47)

Per claims 7-9, 13-16, and 20-22: Kump discloses different types of measuring (test) instruments (CL2-L1-21). Providing a target address for the instrument in the program code would obviously be necessary in order to determine which instrument is receiving the program code download (transfer) and hence would have knowingly been incorporated by a skilled artisan using the reasoning cited above. The examiner also notes that the IEEE 488 bus indicated by Kump (CL2-L63) and Lloyd (Fig. 3) requires the application of instrument addresses in order to address a "target" instrument. In this case, the "target" instrument address is simply the address of interest (See: see "target", Microsoft Computer Dictionary, 1997). The IEEE 488 bus standard requires instrument device to have a unique bus address (See: Overview of IEEE-488, page Z-152). Devices must also "identify" themselves (i.e. instrument "type") when addressed on the bus. Obviously, the central computers disclosed by Lloyd and Kump would necessarily maintain instrument type information. While claim 8 stands rejected under 112(1), the examiner has interpreted the claimed "mapping" of coupling information recited in claim 8 to simply be identifying instruments coupled to the bus in lieu of the specifications lack a specific definition.

Per claim 11, 12, 18, 19: As cited above, the combination of Lloyd and Kump renders obvious program upgrades via local memory (Lloyd: Fig. 2, CL2-L37-64) and via an Ethernet (inter-regional) network (Kump: CL2-L45).

Per claims 23-25: As cited above, the combination of Lloyd and Kump renders obvious executing program code via an updated measuring instrument. (Lloyd: Fig. 2, CL2-L37-64, Kump: CL2-L47, CL4-L58, Fig. 1).

6. Claims 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,397,021 issued to Lloyd et al in view of U.S. Patent 4,736,374 issued to Kump et al in further view of U.S. Patent 6,021,276 issued to Demke et al.

As noted above, the combination of Lloyd and Kump renders obvious the limitations of independent claim 1.

The combination of Lloyd and Kump further not explicitly teach updating firmware by transmitting program code via the Internet (claim 5) or a CD-ROM as the storage medium (claim 6).

Demke teaches techniques for downloading program code (micro-code) and firmware inclusive of updating firmware (CL4-L61) as recited in claim 2, transmitting program code via the Internet (CL6-L39-41, CL3-L19) as recited in claim 5, using a CD-ROM as the storage medium (CL3-L19) as recited in claim 6, and downloading targeted program code (CL4-L58) by way of a list of types (i.e. parameters in a file, CL6-L35) as recited in claim 8. Identifying the instrument type is also necessitated by the IEEE 488 bus disclosed by Kump and Lloyd as previously noted above.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to further modify the teachings of Lloyd and Kump, with the teaching of Demke using the same reasoning as previously recited above. Specifically, a skilled artisan would have made an effort to become aware of what capabilities had already been developed in the market place, and having access to the teachings of

Lloyd and Kump, would have knowingly further modified the teachings of Lloyd and Kump with the teachings of Demke to realize the elements of the claimed invention and gain the advantage of reduced development time and cost.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Careful consideration should be given prior to applicant's response to this Office Action.

U.S. Patent 6,311,149 issued to Ryan et al teaches a re-configurable test instrumentation system.

"Will Measurement Instruments Turn into Agents?", Dobrowiecki et al, IEEE Instrumentation and Measurement Conference, June 1996 teaches test and measurement systems and related firmware updates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached at 571-272-3780. The Official Fax Number is: (703) 872-9306

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September 19, 2005